U.S. PATENT APPLICATION

FOR

LIQUID DISPENSER

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LIQUID DISPENSER

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to a liquid dispenser and, more particularly, to an insulated liquid dispenser.

Description of Related Art

[0002] Commercial beverage dispensers are used to provide liquid at select locations. Typically these beverage dispensers must be more durable than beverage dispensers intended for use in the home. Most commercial beverage dispensers are made of hard plastic and tend to be heavy, even when empty.

[0003] Liquid beverage dispensers housed within soft-sided bags have been utilized. While such dispensers may be lighter-weight than conventional commercial beverage dispensers made of hard plastic, they tend to lack rigidity and sufficient insulation. Consequently, they are primarily intended for use with cold beverages.

[0004] It would be desirable to provide a lightweight, durable dispenser that is suitable for use with cold or hot beverages.

SUMMARY OF THE INVENTION

[0005] An aspect of the present invention relates to a liquid dispenser that includes a liquid container, a support member configured to receive and thermally insulate the liquid container; and a flexible cover configured to receive the liquid container and the support member therein.

[0006] According to a feature of the invention, the support member provides overall structural rigidity to the flexible cover when the support member is received within the cover. The support member may include a cavity configured to receive the

liquid container therein. The support member may also include a top portion having opening to receive the liquid container.

[0007] Preferably, the support member is configured to substantially enclose at least bottom and outer side wall portions of said liquid container. Also preferably, the liquid the support member is formed of at least one of expanded polypropylene (EPP), expanded polystyrene (EPS), and an Arcel® material. More preferably, the support member is formed of expanded polypropylene.

[0008] According to another feature of the invention, the liquid container may be formed of a flexible material.

[0009] According to still another feature of the invention, the liquid container is formed of at least one of polycarbonate, nylon, SAN (styrene-acrylonitrile), polyethylene, PP (polypropylene), PET or PETE (poly (ethylene terephthalate)).

[0010] According to yet another feature of the invention, a spout is connected to the liquid container.

[0011] According to another feature of the invention, the flexible cover is formed of nylon fabric or other similar material. Preferably, the flexible cover includes an insulating material that further insulates the liquid container. Also preferably, the flexible cover is lined with a reflective vapor barrier material.

[0012] According to another features of the invention, a top portion of the flexible cover opens to receive the support member therein. Preferably, a handle is attached to the cover.

[0013] According to another feature of the invention, the liquid dispenser may further include a stand to support the dispenser.

[0014] It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only and are not restrictive of the invention, as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] The accompanying drawings, which are incorporated in and constitute a part of this specification, illustrate preferred embodiments of the invention and together with the description, serve to explain principles of the invention.

[0016] Figure 1 is a perspective view of a beverage dispenser according to a first embodiment of the invention.

[0017] Figure 2 shows constituent parts of the beverage dispenser according the embodiment of Figure 1.

[0018] Figure 3 is a perspective view of a beverage dispenser according to a second embodiment of the invention.

[0019] Figure 4 shows constituent parts of the beverage dispenser according the embodiment of Figure 3.

[0020] Figure 5 is a perspective view of a beverage dispenser according to a third embodiment of the invention.

[0021] Figure 6 shows constituent parts of the beverage dispenser according the embodiment of Figure 5.

[0022] Figures 7A-7E illustrate various embodiments of stands that may be used to support a liquid dispenser according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0023] Reference will now be made in detail to the presently preferred embodiments of the invention, examples of which are illustrated in the accompanying drawings. An effort has been made to use the same reference numbers throughout the drawings to refer to the same or like parts.

[0024] Figures 1 and 2 show a first embodiment of a liquid dispenser 10 according to the present invention. As illustrated in Fig. 2, the liquid dispenser 10

includes a liquid container 40 that is configured to fit within a support member 30. The liquid container 40 and the support member 30 are enclosed by a cover 20. Both the support member 30 and the cover 20 provide thermal insulation for the liquid container 40, allowing the liquid dispenser 10 to be used for both hot and cold liquids.

[0025] The support member 30 in this example comprises an integrally formed frame with a cavity 32 configured to receive and enclose the side wall and bottom portions of the liquid container 40. In this way, the support member 30 thermally insulates the liquid container 40. As illustrated, the support member 30 may be shaped as a box to define an overall box shaped dispensing device 10. However, the support member 30 (and the cover 30) can have different sizes and shapes. Similarly, although a box shaped liquid container 40 and corresponding box-shaped cavity 32 is utilized in the illustrated example, the liquid container 40 may have other sizes and shapes.

[0026] The liquid container 40 may be placed within and removed from the support member 30, and the liquid container 40 and the support member 30 together may be placed within and removed from the cover 20. The support member 30 thus serves to enclose the liquid container 40 and to provide overall structural rigidity to the dispensing device 10.

[0027] Preferably, the cover 20 according to the invention completely surrounds the support member 30 and the liquid container 40. Preferably, the cover 20 is formed of a flexible, lightweight and durable material, such as a nylon fabric. Other materials may be used, such as polyester, PVC, and cotton, or a combination thereof. Preferably the flexible cover is lined with a reflective vapor barrier material, as known in the art. Such materials may include, for example, a vinyl-backed metallic sheet.

[0028] In this example, the cover 20 includes a handle 24 to facilitate transport of the liquid dispenser 10. The cover 20 also includes a top portion 21 that opens to receive the support member 30. The top portion 21 may be held closed with attachable Velcro portions 22 and 28, or other latching members known in the art.

[0029] Also in this example, a sealable orifice 42 is provided on the top of the liquid container 40 to receive liquids to be dispensed. Further, a spout 26 extends from the cover 20 and connects to an opening 44 in the liquid container 40 through an opening 34 in the support member 30. Other means for dispensing liquid from the container may also be utilized.

[0030] Figures 3 and 4 illustrate a liquid dispenser 10' according to an alternative embodiment. In this example, a spout 26' is attached to a liquid container 40', which is received in a cavity 32' formed in a support member 30'. As shown in Figure 4, the support member includes an opening 34' to accommodate the spout 26'. The liquid container 40' of this embodiment further includes an sealable opening 42' on its top, and a handle 46'.

[0031] As shown in Figure 3, a cover 20 is configured to receive and enclose the support member 30' by way of a closable top portion 21'. The cover 20' includes a slit 29 at a position corresponding to the opening 34' of the support member 30' to accommodate the spout 45 of the liquid container 40'. Preferably, the slit 29 may be sealed after insertion of the liquid container 40' with, for example, Velcro, a zipper or any suitable fastener as well known in the art.

[0032] Figures 5 and 6 illustrate a third embodiment in which the liquid container comprises a liquid container 40'' that is received within a support member 30. In contrast to the rigid liquid container 40 and 40' of the first and second embodiments, the liquid container 40'' comprises a flexible bag. The flexible bag may be formed of, for example a thin plastic material. As with the second embodiment, a spout 45 is attached directly to the liquid container 40''. The liquid container may be filled through a sealable opening 41''.

[0033] In the preferred embodiments, the support member 30 is formed of expanded polypropylene (EPP). However, it should be understood that support member 30 can be formed of a variety of other materials that provide desired insulating characteristics and rigidity to the overall structure. For example, in

addition to, or instead of EPP, the support member 30 can be formed of expanded polystyrene, or Arcel® material.

[0034] In the examples shown in the drawings, the liquid container 40 comprises a container formed of clear polycarbonate material. However, it should be understood that the liquid container according to the invention can comprise other materials. For example, the liquid container also may be formed of nylon, SAN, polyethylene PP, PET or PETE, PVC, or some combination thereof. It may be rigid or flexible. Preferably, the liquid container is a formed of a lightweight material, such as thin plastic.

[0035] According to another feature of the invention, a liquid dispenser 10 optionally may include or incorporate a stand. Various exemplary embodiments of such stands are illustrated in Figures 7A-7E. As shown in Fig. 7A, a stand may comprise four support legs that are attached along the length of the corners of a four-sided liquid dispenser 10. As shown in Figure 7B, a stand 72 may extend along a bottom portion of the beverage container 10. Figure 7C illustrates an embodiment in which a stand comprises a support frame 74. A support frame 76 with another configuration is shown in Figure 7D. A stand comprises a single support platform 76 is illustrated in Figure 7E.

[0036] From the foregoing description, it will be appreciated that the present invention provides several advantages. In particular, it offers a lightweight, durable liquid dispenser that may be used for both hot and cold liquids.

[0037] Various other advantages and embodiments of the invention will be apparent to those skilled in the art from consideration of the specification and practice of the invention disclosed herein. It is intended that the specification and examples be considered as exemplary only, with a true scope and spirit of the invention being indicated by the following claims.